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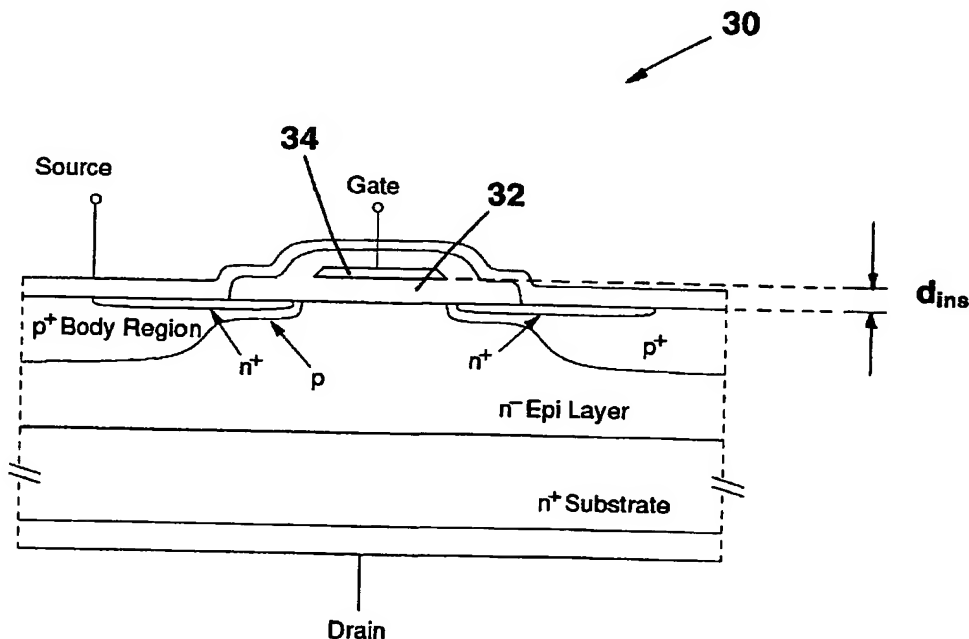
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[Continued on next page]

(54) Title: FAST SWITCHING POWER INSULATED GATE SEMICONDUCTOR DEVICE



(57) Abstract: An insulated gate semiconductor device (30) includes a gate (34), a source terminal, a drain terminal and a variable input capacitance at the gate. A ratio between the input capacitance ( $C_{fiss}$ ) when the device is on and the input capacitance  $C_{iiss}$  when the device is off is less than two and preferably substantially equal to one. This is achieved in one embodiment of the invention by an insulation layer (32) at the gate having an effective thickness  $d_{ins}$  than a minimum thickness.

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A. CLASSIFICATION OF SUBJECT MATTER  
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According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

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EPO-Internal, PAJ, INSPEC, WPI Data

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 02/13257 A (TIHANYL JENOE ; HIRLER FRANZ (DE); WERNER WOLFGANG (DE); INFINEON TECH) 14 February 2002 (2002-02-14) page 4, line 5 - line 12 page 15, line 1 - line 28; figure 5	1-8,10
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